

IN THE CLAIMS

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A computer-aided selection method for a part of a volume, comprising:

~~wherein a computer (1) _____ evaluates _____ evaluating,~~
using a computer, only the a selected part of the
volumewhich, in particular, is displayed via an output
medium (4),

~~_____ wherein the selected part is in the form of a~~
polyhedron with polyhedron surfaces, with (A1 A14)
~~wherein each polyhedron surface (A1 A14) isbeing~~
bounded by polyhedron edges (L1 L23), and with
~~wherein each polyhedron edge (L1 L23) isbeing~~ bounded
by polyhedron corners (E1 E10, E4') and bounds bounding
two, and only two, polyhedron surfaces,
(A1 A14),

~~characterized~~wherein

~~in that the polyhedron corners (E1 E10, E4') are~~
predetermined for the computer (1) in order to determine
the selected part, and

~~in that wherein the polyhedron edges (L1 L23) and~~
polyhedron surfaces (A1 A14) are determined
automatically by the computer (1) on the basis of the
predetermined polyhedron corners (E1 E10, E4').

2. (Currently Amended) The selection method as claimed in claim 1, wherein

~~characterized~~

~~in that a user (9) preferably interactively predetermines~~
repositioning for one of the polyhedron corners ~~(E4)~~ for
the computer ~~(1)~~, and ~~in that~~ wherein the computer ~~(1)~~
then redetermines those polyhedron edges ~~(L6, L11, L12)~~
and polyhedron surfaces ~~(A2—A4)~~ which contain the
repositioned polyhedron corner ~~(E4')~~ in order to
determine the selected part.

3. (Currently Amended) The selection method as claimed in
claim 2,
~~characterized~~

~~in that~~ wherein at least one of the polyhedron surfaces ~~(for~~
~~example A3)~~ which contain the polyhedron corner ~~(E4)~~ to be
repositioned is in the form of a polygon with more than three
polyhedron corners ~~(E1—E4)~~, and ~~in that~~ wherein this
polyhedron surface ~~(A3)~~ is replaced by the computer ~~(1)~~ by
polyhedron surfaces ~~(A7, A8)~~ which are in the form of
triangles, and each containing one polyhedron edge ~~(L4, L5)~~
which is not bounded by the polyhedron corner ~~(E4)~~ to be
repositioned of the polygon ~~(A3)~~ as well as the repositioned
polyhedron corner ~~(E4')~~.

4. (Currently Amended) The selection method as claimed in
claim 2, wherein
~~characterized~~

~~in that~~ at least one of the polyhedron surfaces ~~(for~~
~~example A3)~~ which contain the polyhedron corner ~~(E4)~~ to
be repositioned is a polygon with more than three
polyhedron corners ~~(E1—E4)~~, and wherein
~~in that~~ this polyhedron surface ~~(A3)~~ is replaced by the
computer ~~(1)~~ by two polyhedron surfaces ~~(A9, A10)~~,
wherein one is defined by the polyhedron corners ~~(E1—~~
~~E3)~~ of the polygon ~~(A3)~~ which are not to be repositioned,
and the other is defined by those polyhedron corners ~~(E1,~~
~~E3)~~ of the polygon ~~(A3)~~ which are immediately adjacent to
the polyhedron corner ~~(E4)~~ to be repositioned, and by the

repositioned polyhedron corner ~~(E4')~~.

5. (Currently Amended) The selection method as claimed in claim 3 ~~or 4~~, wherein

~~characterized~~

~~in that~~ the method as claimed in claim 3 ~~and/or 4~~ is carried out only when a vector ~~(V)~~ from the polyhedron corner ~~(E4)~~ to be repositioned to the repositioned polyhedron corner ~~(E4')~~ forms an angle other than zero with the polygon ~~(A3)~~.

6. (Currently Amended) The selection method as claimed in ~~one of claims 2 to 5~~,

~~characterized~~

~~in that~~ wherein the repositioning of the polyhedron corner ~~(E4)~~ is predetermined for the computer ~~(1)~~ by the user ~~(9)~~ shifting the polyhedron corner ~~(E4)~~ along a straight line ~~(10)~~ which is defined before the repositioning of the polyhedron corner ~~(E4)~~.

7. (Currently Amended) The selection method as claimed in claim 6,

~~characterized~~

wherein ~~in that~~ the polyhedron corner ~~(E4)~~ to be repositioned is selected by the user ~~(9)~~ before the repositioning, and ~~in that~~ wherein the straight line ~~(10)~~ is automatically determined by the computer ~~(1)~~ on the basis of the selected polyhedron corner ~~(E4)~~.

8. (Currently Amended) The selection method as claimed in claim 6,

~~characterized~~

~~in that~~ wherein the straight line ~~(10)~~ is pre-determined for the computer ~~(1)~~ by the user ~~(9)~~ before the repositioning of the polyhedron corner ~~(E4)~~.

9. (Currently Amended) The selection method as claimed in ~~one of claims 2 to 7,~~
~~characterized~~
~~in that wherein~~ a new polyhedron corner ~~(E9, E10)~~ is additionally predetermined for the computer ~~(1)~~ by the user ~~(9)~~ preferably interactively.

10. (Currently Amended) The selection method as claimed in claim 9,
~~characterized in that wherein~~ the new polyhedron corner ~~(E9, E10)~~ is ~~predetermined~~ by selection of at least one of a polyhedron edge ~~(for example L1)~~ ~~or~~ and of a polyhedron surface ~~(for example A2)~~, and by subsequently placing the new polyhedron corner ~~(E9, E10)~~ within the at least one of the selected polyhedron edge ~~(L1)~~ and ~~or~~ polyhedron surface ~~(A2)~~.

11. (Currently Amended) The selection method as claimed in ~~one of claims 2 to 10,~~
~~characterized~~
~~in that wherein~~ an unnecessary polyhedron corner ~~(E9, E10)~~ is deleted by the user ~~(9)~~ preferably interactively.

12. (Currently Amended) The selection method as claimed in claim 11, wherein
~~characterized~~
~~in that~~ the deletion of the unnecessary polyhedron corner ~~(E9, E10)~~ by the computer ~~(1)~~ is permitted only when the unnecessary polyhedron corner ~~(E9, E10)~~ is a common polyhedron corner ~~(E9, E10)~~ of at least two mutually adjacent polyhedron surfaces ~~(for example A11 A14)~~ which lie on a common plane.

13. (Currently Amended) The selection method as claimed in ~~one of claims 2 to 12,~~
~~characterized~~
~~in that wherein~~ at least one of the polyhedron surfaces ~~(for example A6)~~ which contain the polyhedron corner ~~(E4)~~

to be repositioned is a polygon with more than three polyhedron corners ~~(E5—E8)~~, and wherein
~~in that the user (9) preferably interactively~~ inserts
an additional polyhedron edge ~~(L23)~~ which is bounded by
two polyhedron corners ~~(for example (E5, E7))~~, which were
previously not immediately adjacent, of the polygon ~~(A6)~~.

14. (Currently Amended) The selection method as claimed in
~~one of claims 213 to 13,~~
~~characterized~~
~~in that~~wherein an unnecessary polyhedron edge ~~(for example~~
~~L18)~~ is deleted by the user ~~(9) preferably interactively.~~

15. (Currently Amended) The selection method as claimed in
claim 14,
~~characterized~~
~~in that~~wherein the deletion of the unnecessary polyhedron
edge ~~(L18)~~ by the computer ~~(1)~~ is permitted only when the
polyhedron surfaces ~~(for example A12, A13)~~ which are adjacent
to the unnecessary polyhedron edge ~~(L18)~~ lie on a common
plane.

16. (Currently Amended) A storage medium in which
machine-legible digital control signals ~~(7)~~ are stored, which
interact with a computer ~~(1)~~ in such a way that, when they are
executed by the computer ~~(1)~~ they result in a selection method
as claimed in ~~one of claims 1 to 15.~~

17. (Currently Amended) A computer program product having
machine-legible digital program code ~~(7)~~ which is stored in a
data storage medium ~~(8)~~, for carrying out a selection method
as claimed in ~~one of claims 1 to 15~~ when the program code ~~(7)~~
is executed by a computer ~~(1)~~.

18. (Currently Amended) A computer program with digital
program code ~~(7)~~ for carrying out a selection method as

claimed in ~~one of claims 1 to 15~~ when the program code ~~(7)~~ is executed by a computer ~~(1)~~.

19. (Currently Amended) A computer which is programmed to carry out a selection method as claimed in ~~one of claims 1 to 15~~.

20. (New) The method of claim 1, further comprising:
displaying the selected part of the volume via an output medium.

21. (New) The selection method as claimed in claim 3, wherein the method as claimed in claim 3 is carried out only when a vector from the polyhedron corner to be repositioned to the repositioned polyhedron corner forms an angle other than zero with the polygon.

22. (New) The selection method as claimed in claim 2, wherein a new polyhedron corner is additionally determined for the computer interactively by the user.

23. (New) The selection method as claimed in claim 2, wherein an unnecessary polyhedron corner is deleted by the user interactively.

24. (New) The selection method as claimed in claim 13, wherein an unnecessary polyhedron edge is deleted by the user interactively.